RAW SEQUENCE LISTING                    DATE: 03/19/2002
PATENT APPLICATION:   US/10/081,327     TIME: 15:06:45

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF3\03192002\J081327.raw

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        3 <110> APPLICANT: Huang, Tim
        5 <120> TITLE OF INVENTION: HIGH-THROUGHPUT METHODS FOR DETECTING DNA METHYLATION
        7 <130> FILE REFERENCE: UMO1523
C-->    9 <140> CURRENT APPLICATION NUMBER: US/10/081,327
C-->   10 <141> CURRENT FILING DATE: 2002-02-21
       12 <150> PRIOR APPLICATION NUMBER: 06/120,592
       13 <151> PRIOR FILING DATE: 1999-02-18
       15 <150> PRIOR APPLICATION NUMBER: 06/118,760
       16 <151> PRIOR FILING DATE: 1999-02-05
       18 <160> NUMBER OF SEQ ID NOS: 54
       20 <170> SOFTWARE: PatentIn version 3.0
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       23 <211> LENGTH: 630
       24 <212> TYPE: DNA
       25 <213> ORGANISM: Homo sapiens;
       27 <220> FEATURE:
       28 <221> NAME/KEY: Unsure
       29 <222> LOCATION: (1)..(630)
       30 <223> OTHER INFORMATION: All n's are unknown.
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W-->   38 ctctgctaaa attttagcgt ntnaatcggg ggatngagat ttgcataagt ttgacgggag     180
W-->   40 ggtcntgtnt tcgtttcaag tatgggtnat tgtccacacc ttttcttnaa gantngcgcg     240
W-->   42 gggggcctaa ttcgaanggt naanaaaana aggaagacng angtgccana atgnaccca      300
W-->   44 atccacanct tatgggganan ctcccaacgc gttngatgca aacttgaatn tcnntactnt     360
W-->   46 cccctaaatn ncttggngtt atcntggccn aactgtttcc tgtnttaaaa tnnttanccg     420
W-->   48 ctccccattc cnctctannt acnaanccgg aagcttnaat tttnaanncc ngggtncct      480
W-->   50 aatganttaa ctaacccect tanttncctt nnncccngc ccgnttcnat ccggaaactn       540
W-->   52 ttttcccect ncnnttatta atccnccncc cccggaaaan gcggttgctt tntgggccct     600
W-->   54 ncctcctcc caatganccc cncccggntt                                         630
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       58 <211> LENGTH: 913
       59 <212> TYPE: DNA
       60 <213> ORGANISM: Homo Sapiens;
       62 <220> FEATURE:
       63 <221> NAME/KEY: Unsure
       64 <222> LOCATION: (1)..(913)
       65 <223> OTHER INFORMATION: All n's are unknown.
       68 <400> SEQUENCE: 2
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W-->   71 aggtcgacca taaggagnca ccagctcgcc ccacttcacc tncggcggng ctggacacga     120
       73 gctgggcgct ataatctgca gaacgtcccg ggccgaaaag gatggggaac acacctggag     180
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W--> 75 ccagggcgaa gacatctaga gatgcaaagg gaatggaaga aaacccggnt aggttctctc   240
W--> 77 agagcaagac ccctttgctg gaaacatagg nttctaagcc cggtgggtgg gagcaacagg   300
W--> 79 gtgggagaac tnagactnca gcctgaactt agcgctnccc caccttgctn cccatnaaga   360
W--> 81 tcccgtattt ggcaggtcca gaccccgcca aacttcaaga ncccggcggt agggacaggc   420
W--> 83 aaacttgcag cgacangggg gacccgaacg gnaccccca ggaggggaan aaggggcngg     480
W--> 85 agatcagacc gttggtgnng gtngaatngg gcnaaattnt ttnnaacaca cntggtggng   540
W--> 87 tggaaccttn aatccttttn tagnctcnct tgncttgcac ctntnttagn ggggaaatcc   600
W--> 89 cctggggngn tnntnncttt gcntngccaa ntgggnggtn ngtnngnntt ttnttccatn   660
W--> 91 ntnntnnggt tggccngatg tgggngnntnt ttccngnttn ncngngnctt tttggggnnn   720
W--> 93 aanatngncn ttattntggn ggaaananaa agcttggnaa tttttggggg aaanttgnnn   780
W--> 95 ccnncnnggt nggnaangnn ttntttnttg nngntctant ncgntnnggt ccnttttnnc   840
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        105 <213> ORGANISM: Homo sapiens;
        107 <220> FEATURE:
        108 <221> NAME/KEY: Unsure
        109 <222> LOCATION: (1)..(952)
        110 <223> OTHER INFORMATION: All n's are unknown.
        113 <400> SEQUENCE: 3
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W--> 116 anggccgcct ttatatcacn agggcggccc gcctncaggt cgaccataat tccatcccag   120
W--> 118 gccatttcct tcctccgggg gtcttttnta aaaganctcc ggnaccncct cccccatccc    180
W--> 120 tggagttgnt tctgcgcgga acttanccct ggggagagga ngtagcccgg nctgtgaccc   240
W--> 122 cggcctttcg ganngtgntc tgcgtntcct tactggcccc tccccttgtc ttccagatac   300
W--> 124 cctgtgtaac naactcgacc agnancggaa ggcgccgtta tgcatccagc anaaattgaa    360
W--> 126 aggtgcggaa ccggnaaaca aagatangag ggntnctgng tgccngccgt nctgcnactg   420
W--> 128 aatgaatgaa tagtgngact agtgaggaag nccaccatcc acngnggatc angatgtntg    480
W--> 130 anngataaaa ntggnaactg attttattgn gagagctccc aacgcattgg atgcatagct    540
W--> 132 tngagtatct ataagnnnca cctaaataac ttgaccnaat catggcaat aactggnncc     600
W--> 134 tgtgngaaan tgnnatccct naccaanccn cacaacatnc taccccnaaa ccataaaagt    660
W--> 136 gtaaaaaccn tggggttccc caatnnantg aaccaacctc ncantnaatt nccntnncnc   720
W--> 138 ctcacnancc ccttttcnaa ccnnaaaacc cttcntaccc actncattaa atgaancncc    780
W--> 140 cacccccct aaaaancccn ntttncaaat tngnccccct tnccnccntc ctntanntan      840
W--> 142 tnnactccna tanctcngnc ctatcntntt tcnnannaac nnnatcaanc tnanncaaaa    900
W--> 144 ncnaaaannc cnnattcccc naaacccnan gaaaacccnn taaaaaacan tt              952
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        148 <211> LENGTH: 1059
        149 <212> TYPE: DNA
        150 <213> ORGANISM: Homo sapiens;
        152 <220> FEATURE:
        153 <221> NAME/KEY: Unsure
        154 <222> LOCATION: (1)..(1059)
        155 <223> OTHER INFORMATION: All n's are unknown.
        158 <400> SEQUENCE: 4
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        161 gggatatcac tagtgcggcc gcctgcaggt cgaccataat gagttgtagc aaatccacac   120
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    165 acccagccta ttgaggaagg cttgttcaag caggcttcgt tcctacaaac acacaaacat   240
    167 ccttctgttt gcctacaaag aaaaggggac cagcgctgga tttgcatgcg aatgaggagc   300
    169 cccgggagga gacgtccttg cccatcaaag gccgcggtag cctggcggcc ctcagccttt   360
    171 gttccagcac ctgctcgcct gcacggcctg acggggccgc gccccgcgct cctggctcgc   420
    173 ccatccaggg tccacggctc actcgtccct cgcctgcccc gcggccacac ctctcgcagc   480
    175 tcatacctca cccgccccgc ggccctgctt cccccagtct catcctctcg ggagcaggcc   540
W--> 177 cgcagggtct gcaaggccaa gaacggaacc ccaaacgcan agggtgggga ggtgagccgg   600
    179 caggacgcaa aactcggaat cgaggcggct tgggtttaca cgttcctta ctctggctca    660
    181 cgctggtctt cacctggtta tgggagagct tcccaacgcg ttggatgcat aacttgagta   720
W--> 183 ttctatagtg gcacctaaat aagctttggc gtaaacatgg gcatanctgg nttcctngnt   780
W--> 185 gaaattggta tccgnttcac aattccccac aacataacaa gcccggaagc nttaaagngg   840
W--> 187 aaaagctggg gtgcctaatg agggactnac tcacattaat tgcgntgggc ttacttgccc   900
W--> 189 nttttccaan cgggnaaaac tttcgngcca acttgcattt aatgaatcgg caaanccccg   960
W--> 191 ngnanaggcg ntttgngnaa tgggcctttt cccttcttgg ttnnttaatn nntnggntng  1020
W--> 193 gccnttggtt nngcaacggg ntaantantn aaagggggg                          1059
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    197 <211> LENGTH: 895
    198 <212> TYPE: DNA
    199 <213> ORGANISM: Homo sapiens;
    201 <220> FEATURE:
    202 <221> NAME/KEY: Unsure
    203 <222> LOCATION: (1)..(895)
    204 <223> OTHER INFORMATION: All n's are unknown.
    207 <400> SEQUENCE: 5
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W--> 210 accataaata tagagccaaa ccgtccaccc agccgtggcg cgaatctctt gncccccaac   120
    212 tctcaagtgt cctttggctc tggagctcct gggcccgggt tccgcatccg ggaggagaaa   180
W--> 214 ggagcgagcg cgcacggtgc ctcccgaggg cagggagcan aggagaggaa aggggaagac   240
W--> 216 tatgaaacgt nctaactaat gcgcgtactg aatgcgcatt cacgtggtca gttaccgatg   300
W--> 218 tgcttctctc tctcctggcc cgcagggaca gagcgcgcca gggacgtgcc agccccggnc   360
W--> 220 ccggctctgc acatttacta tgtgacctcc tgnagtcatt ctctctccca gtcctagatg   420
    222 agatcttaga gctcacgcaa gcttgcctgg tggaacagac taagtatctg actttgcggg   480
W--> 224 gatgtcctga tgcccatcna aggacagaaa tcttggacac ttgcggatgn gctttatggg   540
W--> 226 agaagctcca acgccgttgg atgcatagct ttgggnattc tatagngcac ctnnatagct   600
W--> 228 ttggcgnaan tcatggncat ngntggnttn ctgnggaaa tggtatccgg ttacaatttc    660
W--> 230 acacaacata caacccggaa gcantaaagt ngtaaagcct gggtgcccaa tnggggggng   720
W--> 232 ctaanttcca ttaattgggg tggcncannt gccgntttca gtcggggaaa acctggntgg   780
W--> 234 ccanctggnt tnttggnnnt ggccannccc ggggagaggn ggntttggga anttggnngn   840
W--> 236 tntttcgctt nctggttnct gagttcgtng ggttgggcct ttcggntggg gnang         895
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    240 <211> LENGTH: 900
    241 <212> TYPE: DNA
    242 <213> ORGANISM: Homo sapiens;
    244 <220> FEATURE:
    245 <221> NAME/KEY: Unsure
    246 <222> LOCATION: (1)..(900)
    247 <223> OTHER INFORMATION: All n's are unknown.
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W--> 253 gcctgcaggt cgaccataan aaagccacct ccgtgggaga tggtacnatt cagatcccaa   120
        255 actgaggcga agaccgcgcc ccggagtgtg ggccgccttc ccagtaaatc tgcttatgag   180
W--> 257 aggaagtgat ggaccagatg ctcaaggggt agggactaga ttttgcctta canaggacaa   240
W--> 259 gtcagtctct gaagagaagt cgcggagagg gacgcanaac gcagtgggac ggaanggtct   300
        261 cggggaaagt gggcttgcgc agaagtgcca gggagctcgt gggaagtgca gagagccgct   360
        263 gggattcggc caggaaaagc gagagtgcgc gaacaagctt cacagaaatg gccttatggg   420
W--> 265 agaactccca acgcgttgga tgcntagctt gantatctat agtgtccct aaatacttgg   480
W--> 267 cgtaatcatg gtcatanctg tttcctgtgt taaattgtta tccgctcncn attccccgca   540
W--> 269 cctacgaacc ngaaacctaa ntntaaacct ggggtgctaa taattancna actcccatta   600
W--> 271 attgcnttgc cnncctgccc ctttccatcg ggaaaccgtc ttccacttcn ttaatgaatc   660
W--> 273 gccccccccg gaaaagggtt gcttttnggg ccttccnttc cccctaatc ctgnccngcn   720
W--> 275 tcggtncggn acgttcctcc ccaggngtat tcgtttccga acngggnccc gaaanntnac   780
W--> 277 aagcctnagg cgacctnaag gcntncngnt tccnggnccc ccganancccc aatnacccctt   840
W--> 279 ttagnggaac cccggntaaa accggttncc gaacccttg ctnnttcccc ccntagnaan   900
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        283 <211> LENGTH: 730
        284 <212> TYPE: DNA
        285 <213> ORGANISM: Homo sapiens;
        287 <220> FEATURE:
        288 <221> NAME/KEY: Unsure
        289 <222> LOCATION: (1)..(730)
        290 <223> OTHER INFORMATION: All n's are unknown.
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W--> 298 gttgagggtg gtcccttggg tcccaagaga agctgcccct cagaggctct canancccan   180
W--> 300 gggacggggg ggtggagccc gttgcacagt catgcantgc anctgggggca ggaagcgaga   240
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W--> 304 gagggaggtg ccagaagttg agccctgaag ccctgctggc ccctgggcgc aggcccanct   360
W--> 306 caggcccccca nggattngac tcctgnacct gacattttcn atanaaaacc cccgggaccc   420
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W--> 310 nccccttttgg atccaactgn atttncttta ttttcccca aaactngggt tnnccagncc   540
W--> 312 aaccnttttcc cttttaaaat ttttncccc cccnttcccc cccctnnaac ccccanaana   600
W--> 314 nttttttnccc cnggnntncc naaaatcanc ccccattttt tncccccccc ccnnctcngg   660
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        323 <212> TYPE: DNA
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        326 <220> FEATURE:
        327 <221> NAME/KEY: Unsure
        328 <222> LOCATION: (1)..(925)
        329 <223> OTHER INFORMATION: All n's are unknown.
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        335 tcactagtgc ggccgcctgc aggtcgacca taatccctac accaaccctg ccagggaggt   120
W--> 337 tttctaangg cattttacag atgagcaaac tgtaccagcc agagtctcca aagcgcgggc   180
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/081,327

DATE: 03/19/2002
TIME: 15:06:45

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF3\03192002\J081327.raw

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W--> 343  ccctncccaa aggaggcccc ttacctgcgg gggcacctnc cgggcgcctc gcgtgtcggg   360
W--> 345  cccaaagcca ccgaggctgg gagccgctgg ctatactcgg tctctnctct gcccgncggc   420
W--> 347  ccccgagctn ctactgcang cgggcccgct gcctnttctt ggttcnnctt gctagngccc   480
W--> 349  cncngctgan ggccccatna ncnntnccgg aggagggagg gaggccgctt ggtggccnga   540
W--> 351  ggcggcggtt ntattgctta cttgnctngg ggggtggggg nntctnagan tgggtcnanc   600
W--> 353  tnnntgggnn ggcttnctnn gtngnncccn ctaangnggg gngcatttnt tgcnnnngga   660
W--> 355  nnngcncccn nngnggggnt ttnnnnnaan gtttttttgt ctgannnnca agcantngnn   720
W--> 357  tgganttant ttgnggnggg angnncccnc nacnnggnnn gtanngnttg nnnnagtttt   780
W--> 359  tnnnaggggc cnnanagnan ggnnngngnn nngntgatng ngnttgcnnt ngntaggntn   840
W--> 361  gnnntncgnt tnnnnatgnn ntnnatnatn nnnggcnnna nntgngnagg gngatncntt   900
W--> 363  ngngnctnnt gtngngntnt ttcng                                          925
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367  <211> LENGTH: 1047
368  <212> TYPE: DNA
369  <213> ORGANISM: Homo sapiens;
371  <220> FEATURE:
372  <221> NAME/KEY: Unsure
373  <222> LOCATION: (1)..(1047)
374  <223> OTHER INFORMATION: All n's are unknown.
377  <400> SEQUENCE: 9
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380  gcggccgcct gcaggtcgac cataactctc gaggtttcct ctttccccac ctcatactgc   120
382  tagccctgac gtgaggggat agggtgcctg tcgccgtatt cccatgtaga tacgacagat   180
384  ggaacgtaac tgcggttggc caggggctcc gcagtggctg gggcgccgga gtgcgctgct   240
386  ctgactttcc ggtgccgggc tcctgctcca ggctggaaat gtgctcctag ctctcctagg   300
388  gggacctgga cctaggggag gagattgggc ggagcccgcg gagtgtgccc aaccatggca   360
390  ccaccgtggg cctggtctcc tgcgagcgct ccgggctgtc cctgccggtg catcggggtt   420
392  ccacgtcctg gggagagacg aagatgccct gggaaagata aacagccaag ttttgtcccc   480
394  ggaggaaaga agcttggacc tggtccctgt gtctgctgcg gggagggcca ggggataagt   540
396  gcgggtgcct gcccgcctcc cttgtagaac ttggcgtctc gcaccttta taaacgccag   600
W--> 398  gatccgaggc cagaagttag ntggtggcca ggntagctgc tgaatgggtt gtggangaca   660
W--> 400  aggangtgga tgctggccag ggaagatgtg cttgtcaggt angtacttcg gacaagaaga   720
W--> 402  actntggccc ctgaggaaga acagaaccca aggcacttct ggagcaattt ctggcntggg   780
W--> 404  gtgataaaag gaacttgttt tnaggcnaga cacatnctta tgggagaact tcccaacgcc   840
W--> 406  gttggatcat aactttgaga ttctataagg gcccctaaaa aantttggcg gaaannatgg   900
W--> 408  gcaaaanttg ttcccggggg aaatngtann ccntttacaa attnccncaa cntncgancc   960
W--> 410  cgaaccttaa anggnaaanc ccggggggcc taangngnga nctaactccc attaaatggn  1020
W--> 412  nnggcnnnat ngcccntttt caanncg                                      1047
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416  <211> LENGTH: 634
417  <212> TYPE: DNA
418  <213> ORGANISM: Homo sapiens;
420  <220> FEATURE:
421  <221> NAME/KEY: Unsure
422  <222> LOCATION: (1)..(634)
423  <223> OTHER INFORMATION: All n's are unknown.
426  <400> SEQUENCE: 10
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**VERIFICATION SUMMARY**
**PATENT APPLICATION:**  US/10/081,327

DATE: 03/19/2002
TIME: 15:06:46

Input Set : **A:\Sequence Listing.txt**
Output Set: **N:\CRF3\03192002\J081327.raw**

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L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:34 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:36 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:38 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:40 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
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L:118 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
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L:126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:128 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:130 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:132 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:134 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:136 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:138 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:140 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:177 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:185 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
```

**VERIFICATION SUMMARY**             DATE: 03/19/2002
PATENT APPLICATION:   US/10/081,327    TIME:  15:06:46

Input Set : **A:\Sequence Listing.txt**
Output Set: **N:\CRF3\03192002\J081327.raw**

```
L:187 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:189 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:28075 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:47
L:28090 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:48
L:28105 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:49
L:28120 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:50
L:28135 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:51
L:28150 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:52
L:28165 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:53
L:28180 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:54
```